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ABSTRACT

The Delphi technique was used as one instrument in an evaluation of the Ruppert Education Center, an alternative high school. One of its contributions stemmed from its conventional use as a way to assess goal priorities of school policy-makers. In addition it helped to (1) focus the evaluation; (2) assess community interest, knowledge and participation; (3) measure the congruence between the priorities of the faculty and policy-makers; and (4) clarify and operationalize goals. Used resourcefully, the Delphi technique is a productive evaluation instrument. (Author)

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# ALTERNATIVE USES OF THE DELPHI TECHNIQUE

# IN

# EVALUATING ALTERNATIVE SCHOOLS

by

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# ALTERNATIVE USES OF THE DELPHI TECHNIQUE IN EVALUATING ALTERNATIVE SCHOOLS

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Inevitably, as projects with limited resources grow, their ambition exceeds their current capability. Thus, every once in a while it becomes necessary to examine critically their goals and needs, to decide which areas deserve attention and which can be neglected. Since people within the project will advocate different programs, it is important for them to compromise and agree on a common and smaller set of priorities.

There are different ways to have people agree on what the goals of a project should be. That is, there is no consensus on how to reach consensus. But while methodologies differ, they share the common purpose of helping members of an organization agree on priorities and needs, for example. In our proposal to the Committee for a Comprehensive Education Center (CCEC) and to the Ford Foundation, Educational Research Corporation (ERC) suggested that the Delphi technique would be an effective and equitable method to help the community of the Ruppert Education Center (REC) achieve consensus, or at least some agreement. on its goals for the alternative school it operated, Park East High School, which serves East Harlem and Yorkville residents.

The Delphi technique was developed to allow each member of a group faced with making a valuative judgment to profit from the judgments of others as he reviews his own judgments. By cycling through the feedback operation several times, even groups that had disparate judgments initially tend to move toward consensus. This approach has been found superior to developing judgments in a committee session because both the individual judgments and the feedback, which includes all other judgments not just those of the most vocal members of a group session, are anonymous. Thus, ERC viewed the Delphi technique as an appropriate way of obtaining the goal priorities of various members of the REC community.

We also anticipated that it would aid the evaluation in at least two other ways. First, it would help focus the evaluation, since given the vast array of things one might evaluate, it would seem to make sense to concentrate on those which are seen to be most important to the project. Second, it would provide an unobtrusive measure of community involvement in, and commitment to, the project. Because we planned to

mail the Delphi technique forms, we were interested not only in the nature of the responses, but also the number of responses. A poor response rate would provide one piece of evidence that community involvement needed improvement. In short, we expected the Delphi technique not only to help the REC community reach consensus on its priorities but also help to provide direction and data to the evaluation effort.

## PROCEDURES

### REC Community

Selecting the Sample. In cooperation with Mr. Gilbert Belaval, director of CCEC, ERC decided that, since the project was governed by several decision-making committees (Operating Committee, Joint Planning Committee, Representative Council, CCEC Executive Committee), we would poll these groups as to the relative importance of the various subordinate goals the school designers included in the project's proposal documents. We added a few other names of significant persons in the school's life or history, who were not currently on one of the aforementioned committees. All together the list included 57 people, whose names and addresses we obtained from the CCEC Executive Offices.

Most committees include Park East students. However, because the new elections for student representatives, which were scheduled for the week after the first administration of the Delphi, were postponed for several weeks, no student representatives took part in the Delphi technique.

Round One: After compiling the list of recipients, in late September, 1973, ERC mailed out the first round of the Delphi technique material, which included a cover letter, a questionnaire (response form), and an addressed, stamped envelope (see appendix). The cover letter indicated the role ERC was playing at REC. Because many people find it threatening, we were careful not to use the word "evaluation". Instead, the letter opened with, "This year the Educational Research Corporation has been retained by the Ruppert Education Center to help identify its strengths and weaknesses and recommend the appropriate changes." The letter went on to state that there would be additional steps to this process and asked the recipients to return the forms soon after receiving them.

Because the documents we had read implied four sets of goals, we likewise divided the questionnaire into four parts each corresponding to one set of goals: (1) School-related curriculum; (2) School-related non-curriculum; (3) Community Services; and (4) Community Planning. For each set, we told the participants to express the importance of each goal into one of four categories: (1) "most important," (2) "moderately important," (3) "somewhat important," and (4) "not

important--should not be a goal." To force participants to set priorities and not respond that each goal was most important, we added the constraint that no more than one-third of the goals could be placed in any one level of importance. We also told them to list any additional goals that we might have omitted.

We had hoped that the forms would be returned in one week. However, we received very few and therefore called each participant to encourage them to return the form. While doing this, we found that very few persons lived at their addresses and that in general, the list of names, addresses and telephone numbers were inaccurate and/or out of date. Several committee members had changed jobs or moved residence months before and the CCEC office did not know where to send correspondence. In all, we waited three to four weeks for the returns to Round One, and still received only twenty two of the fifty seven questionnaires that we had distributed.

Round Two: In late October, after we tabulated the results of Round One and revised the form slightly, we mailed it to the participants. We made three revisions. First, we modified the cover letter to clarify the fact that we derived the goals almost verbatim from their documents, and that we were asking them, as members of REC's policy making committees, to express their priority for each goal. Second, some respondents had had trouble conforming to our constraint of placing no more than one-third of the goals in any one of the four categories of importance. Therefore, to give them more flexibility in stratifying their priorities, we added a fifth level of importance, "very important," and inserted it between "most important" and "moderately important". It should be noted, that the names of the categories are not really critical, since we were interested in the relative rankings of each goal.

Third, and probably most important, the form for Round Two indicated the results of Round One. That is, for each goal we obtained a composite rating by scaling the levels of importance and computing the average (mean) score. The form revealed this composite rating by thrice underlining its level of importance. This procedure of informing each participant of the judgments of other participants is basic to the Delphi technique. This time, then, before expressing his priority, each member knew how others responded and then could decide whether to conform or not.

The response to this second round was similar to that of the first round. Again, ERC phoned the non-respondents to encourage them to return the forms. Despite our

efforts, only twenty-four recipients, sixteen of whom had responded in Round One, returned their form. The responses were very consistent with those of Round One and, as we had initially expected, obviated a third round similar to the first two.

Round Three: Round Three represented our innovation to the Delphi technique. Having obtained in the first two rounds the expressed priorities for each goal, we thought that it would be useful, for a number of reasons, to ask the participants what components, if any, existed to achieve each goal and whether or not any components should be added.

One reason for asking the participants to do this was to get one measure of their knowledge of REC. In order to complete the form, they would have had to be familiar with the various procedures and components at REC. Since the participants were on policy making committees, one would hope they would be knowledgeable about the program for which they were making decisions.

Moreover, because of the vagueness or generality of some of the goals in the documents, we thought that it would be useful to have the participants tackle the problem of identifying the operational dimensions of each goal. That is, while some of the goals were couched in rhetorically appealing terms--e.g. "to make racial integration an educational asset" and "to restore to teachers some sense of virility"--they appeared to be so vague or all-inclusive that it would be difficult even for someone familiar with the program at REC to pinpoint specific components to achieve them. Thus, we saw this exercise as one way of getting the participants to confront the issue of translating goals into policy and rhetoric into action.

A third reason for this exercise, was to provide some data that would help determine if there was consistency between the importance of the goals and the measures being employed to achieve them. Because any program has finite resources of personnel, time, and money, it presumably should be investing the most resources in those goals which it considers most important. Thus we wanted to determine, from the perspective of policy makers, if REC has identifiable components to achieve its more important goals. In effect, we were asking the participants the question: To what extent do the resources match the priorities?

Our fourth reason was somewhat selfish. We thought that by having the participants identify components it would help us focus our evaluation efforts. For example, if they, as in fact they did, considered the most important school-related



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curriculum goals to be each student's learning to read and understand mathematical concepts, and listed the basic skills courses as a component to achieve this goal, then it would make sense for us, as we did, to analyze the math and reading test scores. Whenever possible, we wanted to have correspondence between the evaluation effort and the priorities of REC.

In short, we had ambitious reasons for Round Three. We realized it was a relatively formidable task to complete the form. We decided, therefore, to mail out the form to only those thirty participants who had expressed some interest by responding to at least one of the first two rounds. Even so, we anticipated a low response rate, and we were correct. Only six people returned them, and even some of these were incomplete. Most participants, then, did not, and perhaps, could not or would not, complete the forms.

Park East High School Faculty

For most of the reasons (e.g. to help us identify components, to translate vague goals) given in the previous section, we also used the school-related curriculum and school-related non-curriculum sections of our Delphi technique forms with the faculty at Park East. An additional reason, however, was to determine the congruence between the priorities of the members of policy-making committees (some of which do include a few faculty) and the faculty at Park East. One would hope that those who are responsible for implementing many of the policies have priorities similar to those who are responsible for making the policies.

While the forms we used for both groups were the same, the conditions under which we administered them were not. During mid-year at a staff training session, we administered the goal-component form (Round Three) to the faculty. To avoid duplication of effort and ease the task, we had them work in small groups. We had two other considerations for administering the form under these conditions. First, it seemed to be an appropriate use of a staff training session. Second, by having them do it there, we would be assured of a high response rate.

Later in the year, as part of a teacher questionnaire, we administered the form for the first round of the Delphi technique at a staff-training session. We asked for the same information from, and imposed the same constraints on, the faculty as we had from the committee members.



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## RESULTS

As mentioned previously, early in the Delphi technique procedure ERC found various threads of evidence that suggested that actual community participation and communication did not match that outlined in the various documents issued by CCEC. First, there was a low response rate to the Delphi forms. Approximately 40% of the people who received forms for the first two rounds responded, despite our (1) enclosing a stamped, addressed envelope, (2) offering to answer questions and providing a telephone number to do so, and (3) following-up the non-respondents with phone calls. In Round Three, the response rate was only 20%, even though forms were sent only to those who had responded to at least one of the first two rounds. This low response is partly explained by the fact that the task was quite difficult and required some time. Taken as a whole, though, the response rate to the Delphi technique reveals some problems with the committees, whose members presumably have a greater commitment to REC than does the community at large.

Part of the low response rate probably can be attributed to a lack of communication between CCEC and the members of the committees. We have already mentioned that many of the addresses and telephones were out-dated. Worse, many of the names we had received as being members of committees were no longer members. Clearly, the records were in poor condition--in some cases incomplete; in others, inaccurate. We also found, much to our surprise, that some members were unaware of the evaluation effort. In short, then, a combination of factors, including the communication between CCEC and the members of committees, outdated membership lists, and lack of interest, probably contributed to the low response rate to the Delphi technique.

Among those committee members who did respond, there was general agreement on the priorities of the project. For instance, almost everyone agreed that the teaching of basic skills in reading and writing were the most important school-related curriculum goals. Further, most people felt that the community planning goals that provide for community participation and membership on committees and inform them of policy decisions were more important than the other goals.

Perhaps equally important, there also was general agreement on the priorities between the committee members and the faculty at Park East. As was mentioned earlier, one always hopes that the views of policy makers are congruent to those who implement the policy. Otherwise a range of unwanted problems can emerge. Summary tables showed that committee members and teachers had similar priorities on the two sets of goals to which both responded. Rank correlation coefficients were statistically significant, reflecting the convergent opinions of the two groups.

This agreement is a positive finding although one must remember that it does not necessarily follow that because people agree on goals, they also agr e either on how they are being achieved or on how to achieve them. Round Three, the goal-component linkage, clearly reflected this. In most instances, the components were listed by more than one respondent. Many other responses were idiosyncratic. In other words, the respondents often did not agree on the components that existed to achieve the goals, whether or not a component existed, whether or not components should be added, and, if so, what these should be.

There are at least three factors which contribute to the variance in responses. First, the respondents differ in their familiarity with REC. Thus, some may be unaware of certain programs and therefore claim there is no component, when there is one. On the other hand, some may be very familiar with REC and know that a program that superficially appears to contribute to a goal, in fact, does not. Second, people have a loose definition and will name a component even if it is only tangentially related to the goal, others require a clearer relationship between the two.

Major difficulties arose with those goals that were vague and lacked expectations that were specific enough to be identified with programs. Some respondents commented that these goals were idealistic or that the wording was rhetoric. Consequently, the respondents found the task of matching components difficult, and some resorted to naming components, that while related, seemed at best to achieve only a narrow interpretation of the goal. Vagueness led to some providing their own operational definitions of the goal and thus to their naming different components. This experience demonstrated to those participating the necessity for clarity in prescribing goals.

## CONCLUSIONS

ERC had an ambitious rationale for the Delphi technique for use in evaluation and added the modified Third Round, the goal-component linkage, to provide additional feedback to the client. There were finally five ways in which the Delphi technique proved useful in the evaluation project.

First, the conventional use of Delphi did provide an affirmation and a current assessment of the priorities of the school. We were able to rank the various goals in a priority order.

Second, knowledge of the priorities enabled us to focus the evaluation effort. For example, since the knowledge of basic skills was clearly a high priority, we conducted an analysis of test scores in reading and mathematics.

The Delphi process also provided a measure of the community involvement in the school when we discovered some representatives were no longer at their supposed addresses. Our addition of the goal-component linkages to the process also enabled us to assess the knowledge of the school among those who did respond.

Having to match goals with program components helped to convince community representatives of the need to operationalize some of the goals and to avoid simple rhetoric.

Finally, use of the Delphi technique with faculty provided the means for assessing the congruence between the priorities of the faculty and of the policy makers. A lack of congruence would have provided early an indication of problems, but fortunately there were no such problems in this instance.

For all these reasons we have found that, used resourcefully, the Delphi technique has been established as a useful tool in the evaluation of alternative schools.